

CLAIMS

I claim:

1. A programmable microcomputer controlled load sensing system for a log washer apparatus for washing off aggregate material, comprising:

a log washer tank having a pivotally mounted lower end and having an upper end;

a pair of hydraulic cylinders, each hydraulic cylinder having a cylinder base depending from the upper end of the log washer tank and a piston rod attached to a fixed ground support, said hydraulic cylinders disposed on opposite width sides of the log washer tank;

a combiner/divider valve connected to said pair of hydraulic cylinders;

a hydraulic pump and a hydraulic fluid reservoir connected to the combiner/divider valve for pumping hydraulic fluid to and receiving said fluid from said combiner/divider valve for extending and retracting the piston rods;

an electronic pressure sensor disposed between said hydraulic pump and said combiner/divider valve, the sensor having a first state when hydraulic pressure exceeds a high pressure limit, a second state when hydraulic pressure falls below a low pressure limit, and a third state when hydraulic pressure is

between the high pressure and low pressure limits as detected by a programmable microcomputer;

raising means for extending the piston rods of the pair of hydraulic cylinders when hydraulic pressure falls below the low pressure limit as detected and controlled by the programmable microcomputer; and

lowering means for retracting the piston rods of the pair of hydraulic cylinders when hydraulic pressure is above the high pressure limit as detected and controlled by the programmable microcomputer;

whereby the log washer tank is raised and lowered to an angle of incline with only the aggregate material load by the programmable microcomputer to promote efficient washing in response to changes in weight of each load.

2. The programmable microcomputer controlled load sensing system according to claim 1, further comprising a check valve disposed between said hydraulic pump and said combiner/divider valve for preventing back flow of hydraulic fluid through said hydraulic pump.

3. The programmable microcomputer controlled load sensing system according to claim 1, further comprising a high pressure relief valve disposed between said hydraulic pump and said combiner/divider valve for diverting hydraulic fluid to said hydraulic reservoir when hydraulic pressure produced by said hydraulic pressure produced by said hydraulic pump exceeds a high pressure limit as controlled by the programmable microcomputer.

4. The programmable microcomputer controlled load sensing system according to claim 1, wherein said raising means comprises a hydraulic valve disposed between said hydraulic pump and said combiner/divider valve, the hydraulic valve having a solenoid connected to said high/low pressure sensor for opening and closing the hydraulic valve.

5. The programmable microcomputer controlled load sensing system according to claim 1, wherein said lowering means comprises a hydraulic valve disposed between said hydraulic reservoir and said combiner/divider valve, the hydraulic valve having a solenoid connected to said high/low pressure sensor for opening and closing the hydraulic valve.

6. The programmable microcomputer controlled load sensing system according to claim 1, further comprising a needle valve disposed between said combiner/divider valve and said hydraulic reservoir for regulating the flow rate of hydraulic fluid to said hydraulic reservoir.